

IN THE CLAIMS:

Please amend the claims as follows, without prejudice:

Claim 1 CANCELED.

Claim 2 CANCELED

Claim 3 (Currently amended) A chemical change agent for preparing a synthetic fuel comprising:

water;

glycerides;

a surfactant; and

a tall oil pitch.

Claim 4 (Canceled)

Claim 5 (Original) The chemical change agent for preparing a synthetic fuel of claim 3 wherein the glycerides have a carbon number of sixteen to eighteen.

Claim 6 (Original) The chemical change agent for preparing a synthetic fuel of claim 3 wherein the glycerides are vegetable oil.

Claim 7 (Previously presented) The chemical change agent for preparing a synthetic fuel of claim 3 wherein the glycerides are selected from the group consisting of soybean oil, palm oil, corn oil, and cotton seed oil.

Claim 8 (Original) The chemical change agent for preparing a synthetic fuel of claim 3 wherein the pH is maintained between about 7.0 and 11.0.

Claim 9 (Original) The chemical change agent for preparing a synthetic fuel of claim 3 wherein a portion of the surfactant is created through the addition of a base to the glycerides.

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Claim 10 (Currently amended) The chemical change agent for preparing a synthetic fuel of claim 3 wherein

the water is from up to 70 wt. % of the chemical change agent;

the tall oil pitch is from up to 60 wt. % of the chemical change agent;

the glycerides are from 0.25 wt. % to 40 wt. % of the chemical change agent; and

the surfactant is from 0.25 wt. % to 4 wt. % of the chemical change agent.

Claim 11 (Original) The chemical change agent for synthetic fuel of claim 3 wherein the chemical change agent is characterized as having a viscosity between around 50 centipoise to about 200 centipoise.

Claim 12 (Original) The chemical change agent for synthetic fuel of claim 3 wherein the chemical change agent is characterized as having a sulfur content of less than 0.2% by weight.

Claim 13 (Original) The chemical change agent for preparing a synthetic fuel for synthetic fuel of claim 3 wherein the chemical change agent is characterized as having a closed cup flash point of at least about 392 °F (200 °C).

Claim 14 (Original) The chemical change agent for preparing a synthetic fuel of claim 3 wherein the chemical change agent creates a stable emulsion at storage temperatures between about 70 °F and 160 °F (21 °C and 71 °C).

Claim 15 (Original) The chemical change agent for preparing a synthetic fuel of claim 3, wherein the surfactant is an anionic soap.

Claim 16 (Original) The chemical change agent for preparing a synthetic fuel of claim 3, wherein the surfactant is derived from tall oil.

Claim 17 CANCELED.

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Claim 18 (Previously presented) A method of producing a chemical change agent comprising the steps of:

combining water, glycerides, and a surfactant;
heating a tall oil pitch to at least about 200 °F (93 °C); and
adding tall oil pitch and the water, glycerides, and the surfactant to form an emulsion.

Claim 19 (Original) The method of producing a chemical change agent of claim 18, further including the step of subjecting the emulsion to shear in a mixer.

Claim 20 (Original) The method of producing a chemical change agent of claim 18, wherein the emulsion is in droplets between 5 microns to 10 microns.

Claim 21 (Previously presented) The method of producing a chemical change agent of claim 18, wherein the step of adding tall oil pitch and the water, glycerides, and surfactant is performed using a mixer, wherein the mixer is a colloid mill or a turbine type rotor-stator device.

Claim 22 (Original) The method of producing a chemical change agent of claim 18, further including the following step of adding a base to the water, glycerides, and surfactant before adding the pitch oil and forming the emulsion until the chemical change agent has a concentration of about 0.05 mol % to about 0.1 mol % base.

Claim 23 (Previously presented) A solid synthetic fuel comprising:

solid coal treated with a chemical change agent, the chemical change agent including water in a continuous phase; glycerides in a discrete phase; and a surfactant.

Claim 24 (Previously presented) A synthetic fuel comprising:

coal;
water;
glycerides;
a surfactant; and
tall oil.

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Claim 25 (Previously presented) The synthetic fuel of claim 24 wherein the coal is in a range of about 98.8 weight percent to about 99.5 weight percent of the synthetic fuel and wherein the water, glycerides, the surfactant, and the tall oil form a chemical change agent that is in a range of about 0.5 weight percent to about 1.2 weight percent of the synthetic fuel.

Claim 26 (Original) A method of producing synthetic fuel comprising the steps of:

mixing fine carbonaceous material with a chemical change agent comprising an emulsion of water, tall oil, glycerides, and surfactant; and

pressing the carbonaceous material with chemical change agent into a briquette.

Claim 27 (Original) A method of producing synthetic fuel comprising the steps of:

mixing fine carbonaceous material with a chemical change agent comprising an emulsion of water, glycerides, and surfactant; and

pressing the carbonaceous material with chemical change agent into a briquette.